122053

Calc in PA

for complexometry

$C_{30}H_{26}N_2O_{13}$

M.=622,54

CAS [1461-15-0]

EINECS 215-957-1

NC 3204 16 00

SYNONYMS: Fluorexone • bis-[N,N-bis-(Carboximethyl)Aminomethyl] Fluorescein • Fluorescein Complexone •

PHYSICAL DATA: Orange powder • Solubility in water 4 g/l. In alcohol 0,6 g/l • M. P.: 300 °C dec. •

APPLICATIONS: Reagent for Ca: R. L. Olsen et al., Talanta, 7, 187 (1961); H. Gibitz, Ärztl. Lab., 9, 389 (1963) • Indicator for the complexometric determination of Ca and Mg: B. M. Tucker, Analyst, 82, 284 (1957); R. Pribil, Ibid., 83, 188 (1958); T. Y. Toribara, L. Koval, Talanta, 7, 248 (1961) • Determination of Ca in biological systems: J. F. Dandrowki, C. L. Benson, Clin. Chem., 18, 1411 (1972); V. C. K. Chiu, D. H. Haynes, J. Byophys, 18, 3 (1977) •

BIBLIOGRAPHY: Beilstein 19, III/IV, 4338 • Conn's IX, 341 • K. L Cheng et al., "Handbook of Organic Analytical Reagents", 225-230, CRC, Boca Raton (Florida) (1982) •

SPECIFICATIONS:

 Identity
 IR p/t.

 λ of max. ABS. in NaOH 0,002 mol/l
 492-500 nm

 A 1%, 1cm, λ max
 >650

 T.L.C
 p/t.

MAXIMUM LIMIT OF IMPURITIES

Insoluble matter in NaOH p/t.

Loss on drying at 135°C 15 %

Suitability as complexometric indicator. p/t.

	Hits	Search Text	DBs
			USPAT;
		40.6 (4)	US-PGPU
1	65	426/\$.ccls. and (chromophore or fluorophore)	B; EPO;
			JPO; DERWENT
2	7	426/\$.ccls. and (chromophore or fluorophore)	USOCR
		12077100151 did (oilfoliophole of fidolophole)	USPAT;
		(sensing or sensor or senses or indicia or	US-PGPU
3	178	inidicating or indicate) same ((chromophore or	B; EPO;
		fluorophore) and gas)	JPO;
			DERWENT
		(sensing or sensor or senses or indicia or	USPAT; US-PGPU
4	464	inidicating or indicate or detection or detecting or detect) same ((chromophore or fluorophore) and	B; EPO;
		gas)	JPO;
		940/	DERWENT
		((sensing or sensor or senses or indicia or	USPAT;
5	126	inidicating or indicate or detection or detecting	US-PGPU
3	120	or detect) same ((chromophore or fluorophore) and	B; EPO; JPO;
		gas)) and (food or vegetable or meat)	DERWENT
		(((sensing or sensor or senses or indicia or	USPAT;
		inidicating or indicate or detection or detecting	US-PGPU
6	21	or detect) same ((chromophore or fluorophore) and	B; EPO;
		gas)) and (food or vegetable or meat)) and palladium	JPO;
			DERWENT USPAT;
		((sensing or sensor or senses or indicia or	US-PGPU
7	78	<pre>inidicating or indicate or detection or detecting or detect)same ((chromophore or fluorophore) and</pre>	B; EPO;
		gas)) and palladium	JPO;
		gus,, and pullualum	DERWENT
		((sensing or sensor or senses or indicia or	USPAT;
_	10	inidicating or indicate or detection or detecting	US-PGPU
8	19	or detect)same ((chromophore or fluorophore) and gas)) and (food or vegetable or meat) same	B; EPO; JPO;
		(packag\$3 or film or bag or container)	DERWENT
			USPAT;
		(sensing or sensor or senses or indicia or	US-PGPU
9	6	inidicating or indicate) same (spoiled or spoilage)	
		and (chromophore or fluorophore)	JPO; DERWENT
			USPAT;
		((sensing or sensor or senses or indicia or	US-PGPU
10	188	<pre>inidicating or indicate)same (spoiled or spoilage or contamination or contaminents)) and</pre>	B; EPO;
		(chromophore or fluorophore)	JPO;
			DERWENT
		(((sensing or sensor or senses or indicia or	USPAT;
		inidicating or indicate)same (spoiled or spoilage or contamination or contaminents)) and	US-PGPU
11	13	(chromophore or fluorophore)) and (food or	B; EPO;
		vegetable or meat) same (packag\$3 or film or bag	JPO; DERWENT
		or container)	
		leansing or sensor or conson or indicia	USPAT;
12	13	(sensing or sensor or senses or indicia or inidicating or indicate) same (spoiled or spoilage)	US-PGPU
**	15	and (426/231 or 426/232)	JPO;
			DERWENT
			USPAT;
		((sensing or sensor or senses or indicia or	US-PGPU
13	0	inidicating or indicate) same (spoiled or spoilage)	
		and (426/231 or 426/232)) and palladium	JPO; DERWENT
		("2485566" "2626855" "3067015" "4003709"	
14	8	"4285697" "4308028" "5306466" "5439648").PN.	USPAT
		, , , , , , , , , , , , , , , , , , , ,	USPAT;
			US-PGPU
15	176	(426/232).CCLS.	B; EPO;
			JPO;
\vdash			DERWENT
			USPAT; US-PGPU
16	633	(426/231).CCLS.	B; EPO;
			JPO;
L			DERWENT

	Hits	Search Text	DBs
			USPAT;
	405	440.6 (0.7)	US-PGPU
17	407	(426/87).CCLS.	B; EPO;
			JPO; DERWENT
			USPAT:
			US-PGPU
18	449	(426/112).CCLS.	B; EPO;
1			JPO;
L			DERWENT
			USPAT;
19	1	73/866.3 and palladium	US-PGPU B; EPO;
1	*	737000.3 and parradium	JPO;
			DERWENT
			USPAT;
			US-PGPU
20	237	(422/82.07).CCLS.	B; EPO;
			JPO;
\vdash			DERWENT
			USPAT; US-PGPU
21	597	(422/82.08).CCLS.	B; EPO;
			JPO;
<u> </u>			DERWENT
		(((422/82.07).CCLS.) or ((422/82.08).CCLS.)) and	USPAT;
22	3	(chromophore or fluorophore) and (food or	US-PGPU
122	3	vegetable or meat) same (packag\$3 or film or bag	B; EPO; JPO;
		or container)	DERWENT
			USPAT;
		(fluorexon or flourescein) and (food or vegetable	US-PGPU
23	5	or meat) same (packag\$3 or film or bag or	B; EPO;
		container)	JPO;
			DERWENT
		(fluorexon or fluorescein) and (food or vegetable	USPAT;
24	314	or meat) same (packag\$3 or film or bag or	B; EPO;
		container)	JPO;
			DERWENT
			USPAT;
25	32	calcein same (chromophore or fluorophore)	US-PGPU
2 3	32	carcern same (chromophore of finotophore)	B; EPO; JPO;
			DERWENT
26	7	#1000E2#	EPO;
26	1	"1960552"	DERWENT
27	1	"19605522"	EPO;
	_	15000022	DERWENT
28	2	"0449798"	EPO;
			DERWENT
29	3	"4332512"	EPO; DERWENT
			USPAT;
		((sensing or sensor or senses or indicia or inidicating or indicate or detection or detecting	US-PGPU
30	308	or detect) same spoil\$3) and (food or vegetable or	D DD0
		meat) same (packag\$3 or film or bag or container)	JPO;
<u> </u>			DERWENT
		(((sensing or sensor or senses or indicia or	USPAT;
31	6	inidicating or indicate or detection or detecting or detect) same spoil\$3) and (food or vegetable or	
		meat) same (packag\$3 or film or bag or	JPO;
		container)) and palladium	DERWENT
			USPAT;
1	40	(((426/232).CCLS.) or ((426/231).CCLS.) or	US-PGPU
32	49	((426/87).CCLS.) or ((422/82.07).CCLS.) or ((422/82.08).CCLS.)) and palladium	B; EPO;
		((122/02.00).comb.// and parradrum	JPO; DERWENT
			USPAT;
		(((426/232).CCLS.) or ((426/231).CCLS.) or	US-PGPU
33	1	((426/87).CCLS.) or ((422/82.07).CCLS.) or	B; EPO;
		((422/82.08).CCLS.)) and fluorexon	JPO;
	1		DERWENT

	Hits	Search Text	DBs
		///////	USPAT;
ا ۾ ا		(((426/232).CCLS.) or ((426/231).CCLS.) or	US-PGPU
34	1	((426/87).CCLS.) or ((422/82.07).CCLS.) or ((422/82.08).CCLS.)) and (calcein with blue)	B; EPO; JPO;
		((422/82.00).ccbs.); and (carcern with blue)	DERWENT
\vdash			USPAT;
		(((426/232).CCLS.) or ((426/231).CCLS.) or	US-PGPU
35	1	((426/87).CCLS.) or ((422/82.07).CCLS.) or	B; EPO;
	_	((422/82.08).CCLS.)) and (calcein same blue)	JPO;
			DERWENT
			USPAT;
		(food or vegetable or meat) same (packag\$3 or	US-PGPU
36	4	film or bag or container) and (calcein same blue)	B; EPO;
		, , , , , , , , , , , , , , , , , , , ,	JPO;
			DERWENT
			USPAT; US-PGPU
37	11	(food or vegetable or meat) same (packag\$3 or	B; EPO;
,	11	film or bag or container) and (calcein)	JPO;
			DERWENT
			USPAT;
			US-PGPU
38	0	palladium same (calcein)	B; EPO;
			JPO;
			DERWENT
			USPAT;
ا م	204		US-PGPU
39	124	palladium and (calcein)	B; EPO;
			JPO; DERWENT
$\vdash\vdash$			USPAT;
		(fluorexon or fluorescein or calcein) and (food	US-PGPU
40	320	or vegetable or meat) same (packag\$3 or film or	B; EPO;
		bag or container)	JPO;
			DERWENT
			USPAT;
	_	fluorexon and ((fluorexon or fluorescein or	US-PGPU
41	3	calcein) and (food or vegetable or meat) same	B; EPO;
1		(packag\$3 or film or bag or container))	JPO; DERWENT
			USPAT;
		((fluorexon or fluorescein or calcein) and (food	US-PGPU
42	22	or vegetable or meat) same (packag\$3 or film or	B; EPO;
		bag or container)) and palladium	JPO;
			DERWENT
			USPAT;
	l_		US-PGPU
43	1	(fluorexon and palladium)	B; EPO;
	1		JPO;
\vdash			DERWENT
	1		USPAT; US-PGPU
44	62	(calcein and palladium) and (food or vegetable or	B; EPO;
`		meat)	JPO;
			DERWENT
	1		USPAT;
		(sensing or sensor or senses or indicia or	US-PGPU
45	0	inidicating or indicate or detect\$3) same (spoiled	
		or spoilage) and calcein and palladium	JPO;
\vdash			DERWENT
		leaneing or sensor or senses or indicia or	USPAT;
46	3	(sensing or sensor or senses or indicia or inidicating or indicate or detect\$3)same (spoiled	US-PGPU
ا ۵ د	١,	or spoilage) and calcein	JPO;
	1	ar abantado, ana outaan.	DERWENT
	 		USPAT;
1	}	(sensing or sensor or senses or indicia or	US-PGPU
47	2	inidicating or indicate or detect\$3) same (spoiled	B; EPO;
		or spoilage) and calcein and metal	JPO;
1	1		DERWENT

	Hits	Search Text	DBs
48	33	("2485556" "3067015" "3520124" "4003709" "4066403" "4098577" "4105800" "4154107" "4195056" "4195058" "4212153" "4285697" "4292916" "4938389" "5045283" "5053339" "5058088" "5085802" "5096813" "5156780" "5180598" "5182212" "5254473" "5306466" "5407829" "5439648" "5443987" "5653941" "5663072" "5753285" "5876753" "5981614" "6057162").PN.	USPAT
49	O	(Fluorescein adj complexon) and palladium	USPAT; US-PGPU B; EPO; JPO; DERWENT
50	2	(sensing or sensor or senses or indicia or indicating or indicate or detect\$3)same (spoiled or spoilage) and(Fluorescein adj complexon) and metal	USPAT; US-PGPU B; EPO; JPO; DERWENT
51	2	(sensing or sensor or senses or indicia or inidicating or indicate or detect\$3)same (spoiled or spoilage) and(Fluorescein adj complexon)	USPAT; US-PGPU B; EPO; JPO; DERWENT
52	2	(sensing or sensor or senses or indicia or inidicating or indicate or detect\$3)same (spoiled or spoilage) and(Fluorescein with complexon)	USPAT; US-PGPU B; EPO; JPO; DERWENT
53	3	(sensing or sensor or senses or indicia or inidicating or indicate or detect\$3)same (spoiled or spoilage) and(Fluorescein and calcein)	USPAT; US-PGPU B; EPO; JPO; DERWENT
54	895	(sensing or sensor or senses or indicia or inidicating or indicate or detect\$3)and((Fluorescein adj complexon)or calcein)	USPAT; US-PGPU B; EPO; JPO; DERWENT
55	115	((sensing or sensor or senses or indicia or inidicating or indicate or detect\$3)and((Fluorescein adj complexon)or calcein)) and palladium	USPAT; US-PGPU B; EPO; JPO; DERWENT
56	3	sensing or sensor or senses or indicia or inidicating or indicate or detect\$3)and(Fluorescein adj complexon	USPAT; US-PGPU B; EPO; JPO; DERWENT
57	2	fluorexon and (Fluorescein adj complexon)	USPAT; US-PGPU B; EPO; JPO; DERWENT
58	3	calcein and(Fluorescein adj complexon)	USPAT; US-PGPU B; EPO; JPO; DERWENT
59	0	calcein and(Fluorescein adj complexon) and palladium	USPAT; US-PGPU B; EPO; JPO; DERWENT
60	124	(calcein or (Fluorescein adj complexon)) and palladium	USPAT; US-PGPU B; EPO; JPO; DERWENT
61	537	(sensing or sensor or senses or indicia or inidicating or indicate or detect\$3) and((Fluorescein adj complexon)or calcein) and metal	USPAT; US-PGPU B; EPO; JPO; DERWENT

	Hits	Search Text	DBs
		(sensing or sensor or senses or indicia or	USPAT;
		inidicating or indicate or	US-PGPU
62	226	detect\$3) and ((Fluorescein adj complexon) or	B; EPO;
ĺ		calcein) and metal and (food or meat or	JPO;
		vegetables)	DERWENT
		("2485556" "3067015" "3520124" "4003709"	
		"4066403" "4098577" "4105800" "4154107"	
		"4195056" "4195058" "4212153" "4285697"	
		"4292916" "4938389" "5045283" "5053339"	
63	33	"5058088" "5085802" "5096813" "5156780"	USPAT
		"5180598" "5182212" "5254473" "5306466"	
		"5407829" "5439648" "5443987" "5653941" "5663072" "5753285" "5876753" "5981614"	
		"6057162").PN.	
			USPAT;
		(sensing or sensor or senses or indicia or	US-PGPU
64	142	inidicating or indicate or detect\$3)and((Fluorescein adj complexon)or	B; EPO;
		calcein) and pd	JPO;
		carcein, and pd	DERWENT
		((sensing or sensor or senses or indicia or	USPAT;
		inidicating or indicate or	US-PGPU
65	53	detect\$3) and((Fluorescein adj complexon) or	B; EPO;
<u> </u>	1	calcein) and metal and (food or meat or	JPO;
		vegetables)) and pd	DERWENT
		((sensing or sensor or senses or indicia or	USPAT;
		inidicating or indicate or	US-PGPU
66	173	detect\$3) and((Fluorescein adj complexon) or	B; EPO;
١٠٠		calcein) and metal and (food or meat or	JPO;
		vegetables)) not ((calcein or (Fluorescein adj	DERWENT
L		complexon)) and palladium)	
	l	((calcein or (Fluorescein adj complexon)) and	USPAT;
		palladium) not (((sensing or sensor or senses or indicia or inidicating or indicate or	US-PGPU
67	80	detect\$3)and((Fluorescein adj complexon)or	B; EPO;
		calcein) and metal and (food or meat or	JPO;
		vegetables)) and pd)	DERWENT
		((sensing or sensor or senses or indicia or	
		inidicating or indicate or	
		detect\$3) and ((Fluorescein adj complexon) or	USPAT;
		calcein) and metal and (food or meat or	US-PGPU
68	173	vegetables)) not (((sensing or sensor or senses or	B; EPO;
		indicia or inidicating or indicate or	JPO; DERWENT
		detect\$3) and ((Fluorescein adj complexon) or	DEKMENI
		calcein) and metal and (food or meat or	
<u> </u>		vegetables)) and pd)	IICDAM.
			USPAT; US-PGPU
69	3	: "6428748"	B; EPO;
ا	ľ	0120710	JPO;
	1		DERWENT
70	1	2002-627490.NRAN.	DERWENT
۳Ť	t		EPO;
71	5	"2184677"	JPO;
•	١		DERWENT
	†	4	EPO;
72	8	"273570"	JPO;
			DERWENT
	† ************************************		EPO;
73	1	"5321147"	JPO;
			DERWENT
	1		EPO;
74	2	"2735705"	JPO;
L			DERWENT
75	1	"05321147"	JPO
			USPAT;
7.	l,	his 2 souhous mothyl 2 sminomethyl with fluores sin	EPO;
76	lo	bis?carboxymethyl?aminomethyl with fluorescein	JPO;
	1		DERWENT
	1		USPAT;
		!	EPO;
77	l۵	carbovimethyl ?aminomethyl with fluoreccein	:
77	0	carboxymethyl?aminomethyl with fluorescein	JPO; DERWENT

	Hits	Search Text	DBs
78	200	ifluorescein and calcein	USPAT; EPO; JPO; DERWENT
79	2	fluorescein adj complexone	USPAT; EPO; JPO; DERWENT
80	4	(fluorescein adj complexone) or fluorexone	USPAT; EPO; JPO; DERWENT
81	2	((fluorescein adj complexone) or fluorexone) and (metal or palladium)	USPAT; EPO; JPO; DERWENT
82	88		USPAT; EPO; JPO; DERWENT
83	18028	calcein and palladium and 3-bromo-5H,6H,12H,13H-indeno[2,3-a]pyrrolo[3,4-c]c arbazole-7(7H)	USPAT; EPO; JPO; DERWENT
84	3	oftasceine	USPAT; EPO; JPO; DERWENT